Amendment to the Specification:

Please replace the first paragraph in the detailed description, on page 7, with the following amended paragraph:

The present invention involves a method for detecting and quantifying a target nucleic acid sequence in nucleic acid amplification, using primers labeled with fluorescent dyes. The invention may be applied to DNA or RNA target sequences. ~~An initial step involves forming a target nucleotide sequence.~~ In a preferred embodiment, the target nucleotide sequence is located in a short nucleotide fragment, its length preferably being in the range of no less than about 25 to no more than about 100 nucleotides in length. ~~This initial step includes forming the short nucleotide fragment, which will in turn form a short amplification product.~~ As will be discussed below, the use of short nucleotide fragments to produce short amplification products supports the use of dyes having an FRET relationship and results in various distinct advantages in PCR, including speed and reduced risk of side reactions.

Please replace the carryover paragraph at the top of page 11 (depicting only the portion of the paragraph from the top line of page 11 through the end of this paragraph, due to the length of the complete paragraph) with the following carryover paragraph:

strand of DNA 26 complementary to the strand 20 incorporating the tagged forward primer 16, see Fig. 2E. As depicted in Fig. 2F, the resulting double stranded DNA product, comprised of

the strands 20 and 26, has a fluorescent tag incorporated on each strand. When light of a first wavelength λ_1 28 is shown on the reaction mixture, the donor fluorophore 24 experiences excitation, and subsequently emits light of a second wavelength $\lambda_2$30 which is absorbed by the acceptor fluorophore 18, the acceptor fluorophore 18 then emitting light of a third wavelength $\lambda_3$32. In a preferred embodiment, the fluorescent dyes have been placed at the 3' end of the primers used to create the extension product, and the dyes are then accordingly located on the internal sequences of the complementary DNA strands. The ~~target sequence fragments and~~ primers are formed to produce resultant amplification product strands that are short, preferably not more than about 130 base pairs in length, depending on the characteristics of the fluorescent dyes, enabling the fluorescent dyes of the incorporated primers to engage in FRET "cross talk." The close proximity of the tags in the amplification product permits FRET signals to be generated on excitation of the donor fluorophore found on one primer of the original pair. The FRET signals are then measured optically or otherwise instrumentally, such as by a spectrofluorimeter. Preferably, the application of an energy stimulus, such as application of light, and measurement of the resulting signal, such as an FRET signal, all occurs within a single instrument that is also used for the thermal cycling required for PCR.